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LISTING STATEMENT No. 2014

LISTED MAY 8th, 1959  
2,000,000 shares of \$1.00 par value  
Ticker abbreviation "SUM"  
Dial ticker number 210  
Post section 9.1

TORONTO STOCK EXCHANGE

LISTING STATEMENT

MAY 27 1959

SUBMARINE OIL AND GAS LIMITED

Incorporated by Letters Patent dated May 18th, 1955, under The Corporations Act (1953) Ontario

1. Address of the Company's Head Office and of any other offices:  
Suite 1202, 50 King Street West, Toronto, Ontario.

2. Officers of the Company:

OFFICE HELD	NAME	ADDRESS	OCCUPATION
President	Daniel Roland Michener	5 Rosedale Road, Toronto, Ontario	Barrister-at-Law Speaker and Member of the House of Commons
Vice-President	John Pearse Walwyn	97 Beechwood Road, Toronto, Ontario	Investment Dealer
Secretary-Treasurer	James Lawrence Cowan Jenner	3 Crediton Court Toronto, Ontario	Barrister-at-Law

3. Directors of the Company:

NAME	ADDRESS	OCCUPATION
Daniel Roland Michener	5 Rosedale Road, Toronto, Ontario	Barrister-at-Law Speaker and Member of the House of Commons
John Pearse Walwyn	97 Beechwood Road, Toronto, Ontario	Investment Dealer
Hugh Cartwright Cayley	16 Hillholme Road, Toronto, Ontario	Stockbroker
Eugene Frank Coste	215 Lonsdale Road, Toronto, Ontario	Geologist
Robert John McNeil	215 Harborn Road, Cooksville, Ontario	Geologist

4. Names and addresses of all transfer agents:  
Chartered Trust Company, 34 King Street West, Toronto, Ontario.

5. Particulars of any fee charged upon transfer other than customary government taxes:  
50¢ per certificate on a transfer of shares.

6. Names and addresses of all registrars:  
Chartered Trust Company, 34 King Street West, Toronto, Ontario.

7. Amount of authorized capital: \$2,000,000.00.

8. Number of shares and par value: 2,000,000 shares with par value of \$1.00 each.

9. Full details of all shares issued in payment for properties or for any other assets other than cash:  
None.



10. Full details of all shares sold for cash.	Number of Shares	Price per Share	Amount realized by Company
	150,000	\$ .10	\$ 15,000.00
	100,000	.25	25,000.00
	300,000	.40	120,000.00
	100,000	.60	60,000.00
	100,000	.75	75,000.00
	100,000	.90	90,000.00
	5	1.00	5.00
	Total.....	850,005	\$395,005.00
11. Total number of shares issued.	850,005.		
12. Number of shares now in treasury or otherwise unissued.	1,149,995.		
13. Particulars of any issued shares held in trust for the Company or donated for treasury purposes.	None.		
14. Date of last annual meeting.	April 10, 1959.		
15. Date of last report to shareholders.	March 6, 1959.		
16. Details of any treasury shares (or shares issued subject to payment or shares held for the benefit of the treasury) now under option or the subject of any underwriting or sales agreement. If none, this is to be stated.	None.		
17. Details of any shares pooled, deposited in escrow, non-transferable or held under any syndicate agreement or control.	None.		
18. Details of any registration with or approval or authority for sale granted by or any filing with a Securities Commission or corresponding Government body.	The Company has filed a Prospectus dated June 23rd, 1958, with the Ontario Securities Commission under Section 38 of The Securities Act (Ontario).		
19. Has any application for registration with or approval or authority for sale by or any filing with a Securities Commission or corresponding Government body ever been refused, cancelled, suspended or revoked? If so, give particulars.	No.		
20. Particulars of any bonds, debentures, notes, mortgages, charges, liens or hypothecations outstanding.	None - the Company has arranged for a loan from the Bank of Montreal up to \$150,000.00. The Company will be obliged to give security to the bank probably in the form of a note, Section 88 Security, and an assignment of receivables from Union Gas Company of Canada Limited.		



<p>21. Enumerate fully, giving claim or property numbers, approximate acreage, townships and mining camp or oil field:</p> <p>(a) Properties owned where titles vested in Company.</p> <p>(b) Properties leased.</p> <p>(c) Properties otherwise held.</p>	<p>None.</p> <p>See Schedule "A" on page 5.</p> <p>See Schedule "B" on page 6.</p>
<p>22. Full particulars of any royalties or other charges payable upon production from each individual property.</p>	<p>See Schedule "C" on page 6.</p>
<p>23. Are any lawsuits pending against the Company or any of its properties, or are there any other circumstances which might affect the Company's position or title adversely? If so, explain fully.</p>	<p>No.</p>
<p>24. Describe plant and equipment on property.</p>	<p>Casing in 4 wells and well heads on 5 wells.</p>
<p>25. Describe development accomplished and planned.</p>	<p>PROPERTY IN LAKE ERIE—6 wells drilled—gathering system almost completed—4 wells to be drilled this season—gathering system should be completed within five weeks.</p> <p>PROPERTY IN COLCHESTER SOUTH TOWNSHIP—1 well drilled and further well presently drilling—will complete well presently drilling and drill at least one further well.</p>
<p>26. Date and author of mining or petroleum engineer's or geologist's report filed with this application and available for inspection on request.</p>	<p>Report of Ralph E. Davis Associates dated September 9, 1958, respecting the Company's Lake Erie holdings. No report available on acreage in Colchester South Township as insufficient work performed to date.</p>
<p>27. Full particulars of production to date.</p>	<p>PROPERTY IN LAKE ERIE — No production to date. Well No. 1 capped with open flow of 125 M.C.F. natural gas per day. Wells 2, 3, 4 and 5 to be serviced by gathering system have combined open flow of 5,600 M.C.F. natural gas per day. Well No. 6 dry.</p> <p>PROPERTY IN COLCHESTER SOUTH TOWNSHIP — No production to date. Well No. 1 had an oil showing. Well No. 2 still drilling—some oil indicated.</p> <p>SALE OF GAS — A form of agreement has been settled and will be forthwith entered into between the Company and Union Gas Company of Canada Limited providing for the purchase of gas from the Company on the following terms and conditions:</p> <p>Term of Agreement—may be terminated by either party on 1 month's notice after one year.</p> <p>Commencement of Deliveries—June 1, 1959.</p> <p>Annual Volume—230,000 M.C.F.</p> <p>Price—35¢ per M.C.F. (sour gas) subject to adjustments for impurities and for any increase in retail price.</p> <p>Delivery Point—Union sour gas line at Highway No. 3.</p> <p>Production from 2,017 acres held under Mining Licence No. 13011.</p>
<p>28. Have any dividends been paid? If so, give date, per share rate, and amount paid in dollars on each distribution.</p>	<p>No.</p>



29. Name and address of the solicitor or attorney whose certificate that the applicant is a valid and subsisting company and that the shares which have been allotted and issued were legally created and are fully paid and non-assessable has been filed with the Exchange.	Messrs. Lang, Michener & Cranston, 50 King Street West, Toronto, Ontario.
30. (a) Have any shares of the Company ever been listed on any other stock exchange? If so, give particulars.	No.
(b) Is any application for listing the shares of the Company on any other stock exchange now pending or contemplated? If so, give particulars.	No.
(c) Has the listing of any shares of the Company ever been refused or deferred on any stock exchange? If so, give particulars.	No.
31. Particulars of the principal business in which each director has been engaged during the past five years, giving the length of time, position held and name of employing company or firm.	<p>D. R. Michener—President and Director—Barrister and Solicitor; partner, Lang, Michener &amp; Cranston, Toronto, to December 31, 1957. 1953-1959, Member of the House of Commons, Ottawa, and Speaker 1957 to date.</p> <p>J. P. Walwyn—Vice-President and Director—Investment Dealer; Walwyn, Stodgell &amp; Co. Limited, President (formerly Walwyn, Fisher &amp; Co.), Toronto.</p> <p>R. J. McNeil—Director—Chief Geologist, Consolidated Toronto Development Corporation Limited, Toronto (1956-1959) prior to 1956, Manager Contract Drilling Division, Canadian Longyear, North Bay, Ontario.</p> <p>H. C. Cayley—Director—Stockbroker; Vice-President and Director, Wills, Bickle &amp; Co. Limited, Toronto.</p> <p>E. F. Coste—Director—Geologist; President, Consolidated West Petroleum Limited, Toronto.</p>

Dated at Toronto the 28th day of April, 1959.



SUBMARINE OIL AND GAS LIMITED  
"J. P. WALWYN", Vice-President.  
"J. L. C. JENNER", Secretary.

STATEMENT SHOWING NUMBER OF SHAREHOLDERS  
as of April 28, 1959

Number	Shares
20 Holders of 1 – 100 shares.....	1,703
135 " " 101 – 1000 " .....	82,900
23 " " 1001 – 2000 " .....	38,400
9 " " 2001 – 3000 " .....	25,500
8 " " 3001 – 4000 " .....	29,900
7 " " 4001 – 5000 " .....	34,500
19 " " 5001 – up " .....	637,102
221 Stockholders	
Total shares.....	850,005



# **SCHEDULE "A" REFERRED TO IN ITEM 21(b) ON PAGE 3**

The Company owns a 25% interest in 4,823.75 acres under lease in the Township of Colchester South, County of Essex, Province of Ontario, said acreage being hereinafter more fully described.

Imperial Oil Limited hold a 50% interest in said leases and the remaining 25% interest is owned by Harvest Petroleum Limited. The interests of the three participating companies are subject to an agreement made between them dated July 3rd, 1957.

LEASE No.	DESCRIPTION	No. OF ACRES	LEASE No.	DESCRIPTION	No. OF ACRES
11662	S. pt. Lot 75 Front Con.....	80	20839	N. 40 acs. Lot 78 Con. 1.....	40
11663	SE. pt. Lot 8 Gore Con.....	40	21090	Pt. Lot 78 Con. 1, N. of Hwy. 18A, less most Nly. 40 acs. thereof.....	75
11664	SW. pt. Lot 11 1 Range Con.....	24	20838	N. 75 acs. Lot 77 Con. 1.....	75
11665	N. pt. Front Con. Lot 81.....	60	20837	N½ Lot 76 Con. 1.....	100
11666	Pt. Lot 71 1 Front Con.....	14	20867	Pt. Lot 76 Con. 1, N. of Hwy. 18A, less Nly. 100 acs. thereof.....	64
11737	Pt. Lot 80 Front Con.....	95	20844	N½ Lot 75 Con. 1.....	100
14036	E½ of 3 Gore Con.....	100	21317	S½ Lot 75 Con. 1, N. of Hwy. 18A	80
14037	E½ of 2 Range 1.....	100	20755	N. 83 acs. Lot 74 Con. 1.....	83
14038	S. pts. of 78 and 79 Front Con.....	47	20751	N. 100 acs. Lot 73 Con. 1.....	100
14056	S. pts. of 77 Front Con. ....	62	20963	Pt. Lot 73 Con. 1, N. of Hwy. 18A, less N. 100 acs. thereof.....	75
21316	Nly. pt. Lots 4 & 5 Gore Con.....	50	20773	Middle pt. Lot 72 Front Con. ....	38
21318	Sly. pt. Lots 4 & 5 Gore Con.....	50	20742	S. pts. Lots 71 & 72 Con. 1 N. of Hwy. 18A.....	126
21396	Sly. 11.5 acs. of W½ Lot 4 Gore Con., less pt.....	11.5	20752	N. pt. Lot 71 Con. 1.....	53
20753	E½ Lot 4 Gore Con.....	111	20899	Pt. Lot 71 Con. 1.....	5
20748	(1) W½ Lot 3 Gore Con. (2) W. 15 acs. Lot 6 Gore Con.....	115	21199	Pt. Lot 71 Con. 1.....	14
20769	W¼ Lot 2 Gore Con. less SE¼ acre	50	20772	Middle pt. Lot 71 Con. 1.....	20
20845	(1) E½ of W½ Lot 2 Gore Con. (2) SE½ acre of W¼ Lot 2 Gore Con.....	50	21092	(1) N. pts. Lot 69 & 70 Front Con. (2) SW. pt. Lot 8 Gore Con.....	56
21108	W½ Lot 1 Gore Con.....	100	21227	Pt. Park Lot 4 Plan 18 Town of Colchester.....	29.5
20964	E½ Lot 1 Gore Con.....	100	21187	Pt. Lot 8 Gore Con.....	14.5
	(1) Pt. Lot 6 Gore Con.....	38	20872	Pt. Lot 67 Con. 1.....	5
20756	(1) NE 16 acs. Lot 8 Gore Con. (2) Nly. 50 acs. Lot 72 Con. 1.....	66	21159	(1) S½ Lot 67 Con. 1 (2) W. 1 ch. 79½ lks. of S.82 chs. of Lot 66 Con. 1.....	105
20770	Wly. 1640 ft. of Sly. 2766.08 ft. of Lot 8 Gore Con., less most Sly. 1444.08 ft.....	50	20750	Nly. 100 acs. Lot 66 Front Con. less pt.....	90
20966	(1) Sly. 21 chs. 88 Lks. of Wly. 24 chs. 75 lks. Lot 8 Gore Con., less Sly. 5 chs. 60 lks. of Wly. 7 chs. 59 lks. thereof (2) Nly. 20 acs. Lot 64 Con. 1 (3) Pt. Lots 68 & 69 Con. 1.....	113	20818	Pt. N½ Lot 66 Con. 1.....	13
130113	E. 10 chs. of S. 40 chs. of Lot 8 Gore Con.....	40	130112	(1) N. pt. Lot 65 Con. 1 (2) N. pts. Lots 61 & 62 Con. 1.....	55
21088	N. 40 acs. of W½ Lot 9 Gore Con...	40	20749	Pt. N½ Lot 65 Con. 1.....	45.5
20754	E½ Lot 9 Gore Con.....	100	20862	S. 130 acs. Lot 65 Con. 1 less pts....	100
20815	Nly. 25 acs. Lot 10 Gore Con.....	25	20747	N. 67 acs. Lot 63 Con. 1.....	67
20743	S. pt. Lot 10 Gore Con.....	175	20866	(1) Sly. 111 acs. Lot 63 Con. 1 less lots in Plan 1227. (2) Lots 1, 2, 3, 4, 7, 8, 9, 12, 14, 15 Plan 1227.....	107
20868	Pt. Lot 11 Gore Con.....	10	20836	Middle pt. of W. pt. Lot 62 Con 1 ..	106
20856	Pts. Lot 11 Gore Con.....	38	20965	Pts. lots 61 & 62 Con. 1.....	74.75
125558	(1) Pt. Lot 11 Gore Con. (2) NW. pt. Lot 61 & N.E. pat. Lot 62 Con. 1.....	24	20841	N. 52 acs. Lot 60 Con. 1, S. of Pot Lake Road.....	52
106822	(1) Pt. Lot 60 Fron Con., N. of Pot Lake Road (2) N. pt. Lot 61 Front Con. (3) Pts. Lot 11 Gore Con.....	109	20746	S. pts. Lot 60 Con. 1.....	80
21200	N. 60 acs. Lot 81 Con. 1.....	60	20840	N. 42 acs. of pt. Lot 59 Front Con. S. of Pot Lake Road.....	42
20744	(1) Pt. Lot 81 lying N. of Hwy. 18A, less most of Nly. 60 acs. (2) Nly. 15 acs. of pt. Lot 81 Con. 1, S of Hwy. 18A.....	64	20771	S. pts. Lot 59 and 60 Front Con.....	56
20853	(1) N. 40 acs. Lot 79 Front Con. (2) N. 50 acs. Lot 80 Front Con.....	90	21121	N. pt. Lot 58 Front Con. S. of Pot Lake Road.....	51.5
21287	S. 100 acs. Lot 80 Front Con., less pts.	95	21089	Pt. Lots 57 and 58 Front Con.....	51.5
			21286	(1) Pts. Lots 58 and 59 Con. 1 (2) Pts. Blocks A & B, & Lot 8 Plan 1243.....	96
			20745	Pts. Lots 57 & 58 Front Con.....	82
				TOTAL NUMBER OF ACRES.....	<u>4,823.75</u>

The Department of Mines issued Mining Licence No. 13011 to the Company on February 1, 1959, covering 2,017 acres of the area previously held under Licence of Occupation No. 12321. This acreage lies immediately off-shore from the Township of Raleigh in the County of Kent and is contiguous on three sides to Licences of Occupation Nos. 12322, 12280 and 12983 owned by the Company. The lease is for a term of 21 years and is renewable thereafter for successive periods of 21 years. The yearly rental is \$2,017.00 and the following royalties are payable:

- 3¢ per M.C.F. natural gas or 8% of prevailing field price, whichever is greater;
- 10% of actual value at wellhead of all petroleum and petroleum products.

The Company has full rights to explore for and produce natural gas, petroleum and petroleum products during the term of the lease.



## SCHEDULE "B" REFERRED TO IN ITEM 21(c) ON PAGE 3

Three exploratory licences of occupation, Nos. 12322, 12280 and 12983, have been issued to the Company under the Mining Act of Ontario and Regulations thereunder. All licences are for a term of three years and in the case of Licence Nos. 12322 and 12280 the said term commenced October 31, 1956, and in the case of Licence No. 12983 from March 17, 1959. The licences set out the right of the Company to enter upon and explore the acreage so licenced for natural gas and petroleum. The acreage so licenced is all situate off-shore in Lake Erie, in front of the Township of Raleigh, in the County of Kent, Ontario. Further particulars of the licences are as follows:

	Annual Rental
Licence No. 12322—covering 2,380 acres more or less.....	\$ 357.00
Licence No. 12280—covering 4,780 acres more or less.....	717.00
Licence No. 12983—covering 2,026 acres more or less.....	303.90
Total.....	<u>9,186</u> <u>\$1,377.90</u>

With respect to each licence the licensee is required to expend:

- (a) during the first year of the licence a sum averaging \$500.00 per square mile;
- (b) during each of the second and third years of the licence a sum averaging \$1,000.00 per square mile or fraction thereof.

Expenditures in excess of these requirements have been made in the drilling of three gas wells and all of the above-mentioned exploratory licences of occupation are presently in good standing.

The licences shall not be transferred or assigned without the consent in writing of the Minister or Deputy Minister of Mines.

The Regulations under which the licences were granted provide that where the Minister is satisfied that a well drilled in the area specified in the licence has ascertained the presence of natural gas or petroleum in commercial quantities and sends notice thereof to the licensee, the licensee shall within sixty days after the date of the notice make an application for a lease of the land included in the licence or any portion thereof. These leases will be for a period of 21 years and renewable if still productive.

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## SCHEDULE "C" REFERRED TO IN ITEM 22 ON PAGE 3

Under mining lease 13011 the Company is obliged to pay a royalty to the Province of Ontario on natural gas of 3¢ per thousand cubic feet or 8% of the prevailing field price for natural gas, whichever is the greater, and royalties on petroleum and petroleum products of 10% of the actual value at the wellhead.

Under the leases of property situate in Colchester South Township, Ontario, the lessors are obliged to pay on oil a royalty of one-eighth of the oil produced, saved and marketed, and on gas a royalty as follows:

From	10 cu. ft. up to	500,000 cu. ft.....	\$100.00 per year
"	500,000	" " 1,000,000	" .....\$150.00 "
"	1,000,000	" " 2,500,000	" .....\$250.00 "
"	2,500,000	" " 5,000,000	" .....\$350.00 "
Over	5,000,000 cu. ft.....		\$500.00 "



# FINANCIAL STATEMENTS

## SUBMARINE OIL AND GAS LIMITED

### BALANCE SHEET as at December 31, 1958

#### ASSETS

##### CURRENT:

Cash in bank.....	\$ 13,477.26	
Short term collateral trust notes.....	100,000.00	
Accrued interest on note.....	685.62	
	<u>          </u>	\$114,162.88

##### INVESTMENT IN OTHER COMPANY—at cost.

(Quoted Market value \$11,257.50).....		11,372.00
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##### LICENCES OF OCCUPATION:

3 licences covering about 10,880 acres under Lake Erie in front of Township of Raleigh, County of Kent, Ontario.

Legal cost to date.....	\$ 300.00	
Prepaid rent.....	1,224.00	
	<u>          </u>	1,524.00

##### DEFERRED:

Exploration and administrative expenditures.....	\$256,836.97	
Organization expense.....	2,952.20	
	<u>          </u>	\$259,789.17
		<u>\$386,848.05</u>

##### OUTSTANDING COMMITMENTS:

- (a) The Company has contracted for the installation of a gathering system to service its main producing wells. At December 31, 1958 the work had not been completed, the cost, however, of the entire project is estimated at approximately \$45,000.00.
- (b) The Company has entered into an arrangement with two other companies to drill one well on land in which the company will have a 25% interest. In this connection the company is obligated to pay 25% of the drilling costs. The total drilling costs are estimated at \$24,000.00.

#### LIABILITIES

##### CURRENT:

Accounts payable and accrued.....		\$ 1,843.05
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##### CAPITAL STOCK (Increase from 1,000,000 shares par value \$1.00 each as per supplementary letters patent dated December 4, 1958)

##### AUTHORIZED

2,000,000 shares par value \$1.00 each.....	<u>\$2,000,000.00</u>
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##### ISSUED FOR CASH:

850,005 shares (Note 'a').....	\$ 850,005.00	
Less: Discount on shares .....	465,000.00	
	<u>          </u>	\$385,005.00
		<u>\$386,848.05</u>

Approved on behalf of the Board:

"J. P. WALWYN", Director.  
"H. C. CAYLEY", Director.

NOTE "a"—During the year ended December 31, 1958, 250,000 shares were issued for \$195,000.00 cash.

#### AUDITORS' REPORT TO THE SHAREHOLDERS

We have examined the balance sheet of Submarine Oil and Gas Limited as at December 31, 1958, and the statement of deferred exploration and administrative expenditures for the period ended on that date. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion, the above balance sheet and statement of deferred exploration and administrative expenditures present fairly the financial position of the company as at December 31, 1958, and the results of its operations for the period ended on that date. We have received all the information and explanations we have required.

Toronto, Ontario.  
March 4, 1959.

"GILBERT A. DOE & CO."  
Chartered Accountants



# STATEMENT OF DEFERRED EXPLORATION AND ADMINISTRATIVE EXPENDITURES

From the Inception of the Company  
May 18, 1955 to December 31, 1958

	May 18, 55 to Dec. 31, 57	Jan. 1, 58 to Dec. 31, 58	Total
EXPLORATION:			
Insurance.....	\$ 500.00	\$ 329.55	\$ 829.55
Engineering report and consultant's fee.....		3,125.00	3,125.00
Geophysical survey.....	5,032.32	11.75	5,044.07
License rentals and licenses.....	2,040.00	2,326.73	4,366.73
Drilling costs.....	41,979.25	199,317.97	241,297.22
Survey re pipeline .....		423.00	423.00
	<u>\$ 49,551.57</u>	<u>\$205,534.00</u>	<u>\$255,085.57</u>
ADMINISTRATIVE:			
Transfer agents' fees.....	\$ 841.62	\$ 541.28	\$ 1,382.90
Legal fees.....	1,470.00	1,570.20	3,040.20
Stationery and printing.....	453.96	403.34	857.30
Capital and place of business tax and filing fees.....	37.04	249.21	286.25
Telephone and telegraph.....		242.26	242.26
Head office charge.....	350.00	600.00	950.00
Audit fees.....	415.00	375.00	790.00
Shareholders' expenses.....		42.95	42.95
Interest paid.....		18.45	18.45
	<u>\$ 3,567.62</u>	<u>\$ 4,042.69</u>	<u>\$ 7,610.31</u>
Less: Interest earned on short term loans.....	2,531.40	3,327.51	5,858.91
	<u>\$ 1,036.22</u>	<u>\$ 715.18</u>	<u>\$ 1,751.40</u>
TOTAL DEFERRED EXPLORATION AND ADMINISTRATIVE EXPENDITURES			<u>\$256,836.97</u>

## ENGINEER'S REPORT

Mr. E. F. Coste  
SUBMARINE OIL AND GAS LIMITED,  
2245 Yonge Street,  
Toronto, Ontario  
Canada

September 9, 1958

Dear Sir:

Pursuant to your request we have made an estimate of the natural gas reserves of Submarine Oil and Gas Limited. Submarine owns leases covering 11,980 acres located in Lake Erie along the south shore of Raleigh Township, Kent County, Ontario.

Four gas wells have been completed in the Salina and Guelph pays of Silurian age. The wells had initial open flows ranging from 959 Mcf per day to 1,771 Mcf per day and averaging 1,399 Mcf per day. The average shut-in wellhead pressure on completion was 511 pounds per square inch gauge.

The Salina and Guelph formations have been productive of gas over much of the southwestern part of the Ontario peninsula. While gas occurrences in the Salina have been more widespread, yields per acre have been substantially better from the Guelph where it is found to be productive. This is due to a generally thicker and more porous section in the Guelph.

The Salina is a salt bearing series. It consists of alternating layers of dolomite, shale, anhydrite and salt. In the West D'Clute area only the Lower Salina member (A-2) is gas bearing. The total thickness of the A-2 in the offshore wells is about 65 feet, of which about 15 feet is gas pay.

The Guelph series is predominantly dolomitic. Only the upper 80 or 90 feet has been penetrated in the Submarine wells, but this is the porous part of the formation. The porous zones consist of coarsely crystalline dolomite with some intergranular porosity. Guelph gas pay in the wells drilled by Submarine is estimated at 27 feet.



Submarine's wells are located immediately south of the West D'Clute field and are believed to be producing from the same reservoir as the West D'Clute field. The initial wellhead pressure of the West D'Clute field was 658 psig. Production from the West D'Clute field to the end of 1957 was approximately 6.5 billion cubic feet, and the pressures presently average 246 psig. A portion of the production from the West D'Clute field has doubtless been obtained from that part of the field underlying Lake Erie. Due to the lower pressure existing on shore, movement of gas from the offshore to the onshore portion of the field will continue.

The average pay thickness of offshore wells is about 42 feet. This is greater than the thicknesses found in the onshore wells of the West D'Clute field. Based on this thickness, an average porosity of 6 percent, connate water of 20 percent, an initial pressure of 511 psig and an abandonment pressure of 200 psig (wellhead), the recoverable reserves are estimated at 1.85 million cubic feet per acre. The offshore area within the -820 foot contour on the top of the Guelph is considered proved for production. A total of 1,654 acres lie within this contour. Based on an average recovery of 1.85 million cubic feet per acre and 1,654 acres, the ultimate reserves are estimated at three billion cubic feet.

Onshore wells have produced water with the gas. It is expected that some water production will accompany the gas from the offshore wells. It would be desirable to produce the offshore wells with sufficient back pressure to minimize water encroachment.

Yours very truly,  
RALPH E. DAVIS ASSOCIATES  
"RALPH E. DAVIS"

SUBMARINE OIL AND GAS LIMITED  
WELL DATA

WELL	TOTAL DEPTH	TOP OF GUELPH (SUBSEA)	PAY THICKNESS		INITIAL SHUT-IN WELLHEAD PRESSURE PSIG	INITIAL OPEN FLOW MCF/D
			SALINA	GUELPH		
Submarine 2.....	1,448	—790	28	28	520	1,616
Submarine 3.....	1,491	—810	nil	25	500	959
Submarine 4.....	1,450	—768	11	18	525	1,250
Submarine 5.....	1,491	—778	23	36	500	1,771

CERTIFICATE

I, RALPH E. DAVIS, of 1238 Commerce Building, Houston, Texas, hereby certify as follows:

- (a) I am a Consulting Engineer and reside at 5220 Caroline Street, Houston, Texas.
- (b) I was graduated from the College of Engineering of the University of Wisconsin in 1906, with the degree of Bachelor of Science in General Engineering. While resident at the University I majored in Geology. I have been engaged in consulting work for more than thirty-five (35) years. My practice has included the study of most of the important oil and gas producing areas in the United States and Canada as well as those in certain other areas.  
  
I am a member of The Natural Gas and Petroleum Association of Canada, the Independent Natural Gas Association of America, the American Association of Petroleum Geologists, the American Institute of Mining, Metallurgical, and Petroleum Engineers, the American Gas Association, the Houston Geological Society, and the Engineers' Society of Western Pennsylvania, and am a registered petroleum engineer in the States of Texas, New York and Louisiana.
- (c) I have no interest directly or indirectly, nor do I expect to receive any interest directly or indirectly, in the properties referred to in the report of September 9, 1958, addressed to Submarine Oil and Gas Limited, or in any securities of Submarine Oil and Gas Limited.
- (d-e) I have made no personal examination of the properties covered by my report of September 9, 1958.
- (f) The basic data utilized by me in the preparation of this report was furnished by Submarine Oil and Gas Limited, supplemented by data covering onshore wells in the D'Clute field obtained during the course of numerous earlier studies for Union Gas Company of Canada, Limited.

September 30, 1958

"RALPH E. DAVIS"











